



proud past, promising future

NEWS RELEASE

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Investigation reveals no link between arsenic in well water and occurrences of Guillain-Barre Syndrome

Vancouver, WA – An investigation into a causal link between exposure to arsenic in groundwater and people with a history of Guillain-Barre Syndrome (GBS) who live in north Clark County and south Cowlitz County has found no evidence of such a link. The investigation was conducted between November 2003 and February 2004 by Clark County Health Department and Cowlitz County Health Department in collaboration with the Washington State Department of Health.

The investigation responded to public concern about a perceived increase in GBS and a possible connection between GBS and arsenic exposure. The concern was expressed last November, as the Clark County Health Department began surveying area wells for arsenic content after reports indicated high levels of arsenic in well water in pockets of north Clark County and south Cowlitz County.

GBS is an inflammatory disorder, sometimes preceded by a recent infection, in which the immune system disables peripheral nerves, causing numbness and severe weakness in the legs and arms. In some cases it results in paralysis. Most people recover within months, but some have persistent impairment.

“We know of no association between GBS and arsenic,” said Dr. James Litch, Epidemic Intelligence Service Officer with the Department of Health. “This was confirmed locally by our investigation. We want to emphasize, however, that arsenic can cause a variety of other health problems, so we urge people with wells, especially those in areas that have reported high levels of arsenic, to get their water tested.”

Through community outreach efforts, the investigation identified five individuals from the areas of north Clark County and south Cowlitz County that have elevated arsenic levels in groundwater, with a history of GBS diagnosed since 1990. Between November 2003 and January 2004, the private wells of these individuals were

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sampled for arsenic levels. All five wells tested within the Environmental Protection Agency drinking water standard of less than ten parts per billion, and three of the wells had no detected arsenic.

The investigation then analyzed hospital discharge data from Washington and Oregon to determine the number of individuals from a) Clark County, and b) north Clark and south Cowlitz counties who were discharged from a hospital with a GBS diagnosis between 1990 and 2001. The data indicated that during this period, 88 GBS cases were identified in persons from Clark County, and four cases were identified in persons from the study area in north Clark and south Cowlitz counties.

The data indicated an annual incident rate of 2.5 GBS cases per 100,000 persons for Clark County, and 3.3 cases per 100,000 persons for the investigation area in north Clark and south Cowlitz counties. These figures are consistent with the national average of one to four GBS cases annually per 100,000 persons.

The investigation included a review of medical literature, which did not identify an association between arsenic exposure and GBS, although there is a similarity in how some of the symptoms of each condition are manifested. The investigation found no evidence of an increased number of GBS cases in the north Clark County and south Cowlitz County area, and no evidence to suggest an increase in the rate of GBS above the expected rates considered within the average range nationally.

The results of the health department survey of arsenic levels in wells in north Clark County and south Cowlitz County will be reported later this month.

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